

Substitute for form 1449/PTO  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  <i>(Use as many sheets as necessary)</i>				<b>Complete if Known</b>	
				Application Number	10/728041
				Filing Date	December 3, 2003
				First Named Inventor	Samuel J. Danishefsky
				Art Unit	1643
				Examiner Name	Karen A. Canella
Sheet	1	of	5	Attorney Docket Number	2003080-0142(SK-893-B)

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. <sup>1</sup>	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code <sup>2</sup> (if known)			
	A1	US-09/276,595			
	A2	US-09/641,742			
	A3	US-09/083,776			
	A4*	US-RE38,04		Longenecker et al.	
	A5*	US-5,977,081	11-02-1999	Marciani	
	A6*	US-6,080,725	06-27-2000	Marciani	
	A7*	US-6,090,789	07-18-2000	Danishefsky et al.	
	A8*	US-20020006900	01-17-2002	Danishefsky et al.	
	A9*	US-6,355,639	03-12-2002	Chou et al.	
	A10*	US-20020038017	03-28-2002	Danishefsky et al.	
	A11*	US-6,548,661	04-15-2003	Danishefsky et al.	
	A12*	US-20030153492	08-14-2003	Danishefsky et al.	
	A13*	US-6,660,714	12-09-2003	Danishefsky et al.	
	A14*	US-20040208884	10-21-2004	Danishefsky et al.	
	A15*	US-7,018,637	03-28-2006	Chong et al.	
	A16*	US-7,160,856	01-09-2007	Danishefsky et al.	
	A17*	US-7,531,181	05-12-2009	Danishefsky et al.	
	A18*	US-7,550,146	06-23-2009	Danishefsky et al.	
	A19*	US-7,635,750	12-22-2009	Danishefsky et al.	
	A20*	US-7,645,454	01-12-2010	Danishefsky et al.	
	A21*	US-20100081786	04-01-2010	Danishefsky et al.	

FOREIGN PATENT DOCUMENTS						
Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages Or Relevant Figures Appear	T <sup>6</sup>
		Country Code <sup>3</sup> -Number <sup>4</sup> -Kind Code <sup>5</sup> (if known)				
	B1	EP-315153-A2	05-10-1989	Syntex Inc		
	B2	WO-9852573-A1	11-26-1998	Galenica Pharmaceuticals Inc et al.		
	B3	WO-9915201-A1	04-01-1999	Sloan Kettering Inst Cancer et al.		
	B4	WO-9948515-A1	09-30-1999	Sloan Kettering Inst Cancer		
	B5	WO-01065261-A1	09-07-2001	Sloan Kettering Inst Cancer		
	B6	WO-04011476-A1	02-05-2004	Sloan Kettering Inst Cancer et al.		
	B7	WO-04050711-A2	06-17-2004	Sloan Kettering Inst Cancer et al.		
	B8	WO-0460915-A2	07-22-2004	Sloan Kettering Inst Cancer et al.		
	B9	WO-10006343-A2	01-14-2010	Sloan Kettering Inst Cancer et al.		

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. \* CITE NO.: Those application(s) which are marked with an single asterisk (\*) next to the Cite No. are not supplied (under 37 CFR 1.98(a)(2)(iii)) because that application was filed after June 30, 2003 or is available in the IFW. <sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

4665073v 1		Date Considered	
---------------	--	--------------------	--

Substitute for form 1449/PTO  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  <i>(Use as many sheets as necessary)</i>				<b>Complete if Known</b>	
				Application Number	10/728041
				Filing Date	December 3, 2003
				First Named Inventor	Samuel J. Danishefsky
				Art Unit	1643
				Examiner Name	Karen A. Canella
Sheet	2	of	5	Attorney Docket Number	2003080-0142(SK-893-B)

NON PATENT LITERATURE DOCUMENTS				
Examiner Initials	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>	
	C1	Allen et al. "Pursuit of optimal carbohydrate-based anticancer vaccines: preparation of a multiantigenic unimolecular glycopeptide containing the Tn, MBr1, and Lewis <sup>x</sup> antigens", J. Am. Chem. Soc., 123:1890-1897, 2001		
	C2	Anderson, P. (1983) Infection & Immunity 39, 233-238		
	C3	Bachman, et al. Journal of Immunology, 2005, Vol. 175, pp. 4677-4685		
	C4	Barington, T. et al. (1993) Infect. Immun. 61, 432-438		
	C5	Barington, T. et al. (1994) Infection & Immunity 62, 9-14		
	C6	Bilodeau et al. J. Am. Chem. Soc. 1995, 117, 7840-7841		
	C7	Bischoff, et al. International Archives of Allergy and Applied Immunology, 1984, Vol. 75, pp. 20-26 (abstract only)		
	C8	Biswas et al. "Construction of carbohydrate-based antitumor vaccines: synthesis of glycosyl amino acids by olefin cross-metathesis", Tetrahedron Letters, 43:6107-6110, 2002		
	C9	Blackwell et al. "New approaches to olefin cross-metathesis", J. Am. Chem. Soc., 122:58-71, 2000		
	C10	Bosse et al. "Linear synthesis of the tumor-associated carbohydrate antigens Globo-H, SSEA-3, and Gb3", J. Org. Chem., 67:6659-6670, 2002		
	C11	Brezicka et al. Cancer Res. 1989, 49, 1300-1305		
	C12	Brocke, C. et al. Bioorg. & Med. Chem. 2002, 10, 3085-3112		
	C13	Burk et al. Accts. Chem. Res. 2000, 33, 363-372		
	C14	Burk et al. Pure & Appl. Chem. 1996, 68, 37-44		
	C15	Catelani et al. Carb. Res. 1988, 182, 297-300		
	C16	Chappell et al. Tetrahedron 1997, 53, 11109-11120		
	C17	Chen et al. J. Am. Chem. Soc. 1998, 120, 7760-7769		
	C18	Cross, A. M. et al. (1994) Journal of Infectious Diseases 170, 834-840		
	C19	D. M. Coltart et al. "Principles of Mucin Architecture: Structural Studies on Synthetic Glycopeptides Bearing Clustered Mono-, Di-, Tri- and Hexasaccharide Glycodomains" J. Am. Chem. Soc. (2002) 124, 9833-9844		
	C20	Danishefsky et al. J. Am. Chem. Soc. 1995, 117, 5701-5711		
	C21	Danishefsky, S. J. et al. Angew. Chem., Int. Ed. Engl. 1996, 35, 1380-1419		
	C22	Dasgupta et al. Carbohydr. Res. 1994, 264, 155-160		
	C23	Database BIOSIS'Online! Biosciences Information Service, Philadelphia, PA, US; 22 March 2002, Kovbasnjuk Olga et al., "Glycosphingolipid Gb3 as biomarker for invasive colon carcinoma cells", FASEB Journal, 16(5):A1200, 2002, Annual Meeting of Professional Research Scientists on Experimental Biology; New Orleans, LA, USA, April 20-24, 2002		
	C24	David et al. J. Chem. Soc. Perkin Trans. I 1981, 1796-1801		
	C25	Dranoff et al. Proc. Natl. Acad. Sci. USA 1993, 90, 3539-3543		
	C26	Efferson, et al. Anticancer Research, 2005, Vol. 25, pp. 715-724		
	C27	Fattom, A. et al. (1999) Vaccine 17, 126-133		
	C28	Ferezou, et al. Nutrition, 2001, Vol. 17, pp. 930-933		
	C29	Fraser-Reid et al. 1990, 55, 6068-6070		
	C30	Fung, P. et al. Cancer Res. 1990, 50, 4308-4314		
	C31	Furstner, A. Angew. Chem., Int. Ed. Engl. 2000, 39, 3013-3043		
	C32	Garegg, P.J. Pure Appl. Chem. 1984, 56, 845-858		

4665073v 1		Date Considered	
---------------	--	--------------------	--

Substitute for form 1449/PTO  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  <i>(Use as many sheets as necessary)</i>				<b>Complete if Known</b>	
				Application Number	10/728041
				Filing Date	December 3, 2003
				First Named Inventor	Samuel J. Danishefsky
				Art Unit	1643
				Examiner Name	Karen A. Canella
Sheet	3	of	5	Attorney Docket Number	2003080-0142(SK-893-B)

C33	Gatza, et al. Journal of Immunology, 2002, Vol. 169, pp. 5227-5235	
C34	Gilewski, et al. PNAS, March 31, 2001, Vol. 98, pp. 3270-3275	
C35	Glunz, P. W. et al. J. Am. Chem. Soc. 1999, 121, 10636-10637 and 14186	
C36	Gordon et al. Carbohydrate Res. 1990, 206, 361-366	
C37	Grazi, et al. Biochemical and Biophysical Research Communications, 1960, Vol. 2, pp. 121-125 (abstract only)	
C38	Griffith et al. J. Am. Chem. Soc. 1990, 112, 5811-5819	
C39	Griffith et al. J. Am. Chem. Soc. 1991, 113, 5863-5864	
C40	Hakomori, S. Adv. Cancer Res. 1989, 52, 257-331	
C41	Hakomori, S. et al. Chem. Biol. 1997, 4, 97-104	
C42	Helling, F. et al. (1994) Cancer Research 54, 197-203	
C43	Hellstrom, I. et al. (1990) Cancer Res. 50, 2183-2190	
C44	International Search Report for PCT/US03/22657 mailed December 10, 2003	
C45	International Search Report for PCT/US2000/022894 mailed April 10, 2001	
C46	International Search Report for PCT/US2004/040253 mailed October 18, 2005	
C47	Jansson et al. J. Org. Chem. 1998, 53, 5629-5647	
C48	Jones, I. G. et al. (1998) Vaccine 16, 109-113	
C49	Kanra, G. et al. (2000) Vaccine 18, 947-954	
C50	Kawai et al. Chem. Lett. 1990, 577-580	
C51	Kedar and Klien, "Cancer Immunotherapy", In: Advances in Cancer Research, 1992, Vol. 59, pp. 245-322	
C52	Keding and Danishefsky, PNAS, 2004, Vol. 101, pp. 11937-11942	
C53	Keding et al. "Hydroxynorleucine as a glycosyl acceptor is an efficient means for introducing amino acid functionality into complex carbohydrates", Tetrahedron Letters, 44:3413-3416, 2003	
C54	Keding, S. J. et al. Tetrahedron 2003, 59, 7023-7031	
C55	Kensil, C. R. et al. (1991) J. Immunol. 146, 431-437	
C56	Kim et al. "Effect of immunological adjuvant combinations on the antibody and T-cell response to vaccination with MUC1-KLH and GD3-KLH conjugates", Vaccine, 19:530-537, 2001	
C57	Kim et al. J. Org. Chem. 1995, 60, 7716-7717	
C58	Kim, S. K. et al. (2000) Vaccine 18, 597-603	
C59	Kjeldsen, T. B. et al. Cancer Res. 1988, 48, 2214-2220	
C60	Koeman et al. Tetrahedron 1993, 49, 5291-5304	
C61	Kudryashov et al. "Toward optimized carbohydrate-based anticancer vaccines: Epitope clustering, carrier structure, and adjuvant all influence antibody responses to lewis <sup>y</sup> conjugates in mice", Proc. Natl. Acad. Sci. USA, 98:3264-3269, 2001	
C62	Kudryashov et al. Cancer Immunol. Immunother. 1998, 45, 281-286	
C63	Kudryashov, V. et al. (1998) Glycoconjugate Journal 15, 243-249	
C64	Kuduk, S. D. et al. J. Am. Chem. Soc. 1998, 120, 12474-12485	
C65	Kurikka, S. (1996) Vaccine 14, 1239-1242	
C66	Kwon et al. J. Am. Chem. Soc. 1998, 120, 1588-1599	
C67	Lanzavechis, Science, 1993, 260, 937-944	
C68	Livingston et al. Curr. Opin. Immunol. 1992, 4, 624-629	
C69	Livingston et al. J. Cancer Res. 1989, 49, 7045-7050	
C70	Livingston et al. J. Clin. Oncol., 1994, 12, 1036-1044	
C71	Livingston, P. O. et al. Cancer Immunol. Immunother. 1997, 45, 1-9	
C72	Livingston, P. O. et al. Cancer Immunol. Immunother. 1997, 45, 10-19	
4665073v 1		Date Considered

Substitute for form 1449/PTO  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  <i>(Use as many sheets as necessary)</i>				<b>Complete if Known</b>	
				Application Number	10/728041
				Filing Date	December 3, 2003
				First Named Inventor	Samuel J. Danishefsky
				Art Unit	1643
				Examiner Name	Karen A. Canella
Sheet	4	of	5	Attorney Docket Number	2003080-0142(SK-893-B)

C73	Lloyd et al. (1966) Biochemistry 5, 1489-1501	
C74	Lloyd et al. Am. J. Clin. Path. 1987, 87, 129-139	
C75	Lloyd et al. Cancer Biol. 1991, 2, 421-431	
C76	Lo-Man, R. et al. Cancer Res., 1999, 59, 1520-1524	
C77	Lönn, H. J. Carbohydr. Chem. 1987, 6, 301-306	
C78	M.A. Bernstein et al. Carbohydr. Res. 1980, 78, C1-C3	
C79	Maranduba et al. Carbohydr. Res. 1986, 151, 105-119	
C80	March, Advanced Organic Chemistry, 2nd edition, 1977, page 867	
C81	Marciani, D. J. et al. (2000) Vaccine 18, 3141-3151	
C82	Melani et al. Cancer Res. 1991, 51, 2897-2901	
C83	Merritt et al. J. Am. Chem. Soc. 1994, 116, 5551-5559	
C84	Molrine, D. C. et al. (1995) Annals of International Medicine 123, 828-834	
C85	Mootoo et al. J. Am. Chem. Soc. 1988, 110, 2662-2663	
C86	Mootoo et al. J. Am. Chem. Soc. 1989, 111, 8540-8542	
C87	Mukaiyama et al. Chem. Lett. 1981, 431-432	
C88	Nicolaou et al. "A practical and enantioselective synthesis of glycosphingolipids and related compounds. Total synthesis of Globotriasosylceramide (Gb <sub>3</sub> )", J. Am. Chem. Soc., 110:7910-7912, 1988	
C89	Nicolaou et al. J. Am. Chem. Soc. 1990, 112, 3693-3695	
C90	Nilsson et al. Cancer Res. 1986, 46, 1403-1407	
C91	Nilsson et al. Glycoconjugate J. 1984, 1, 43-49	
C92	Ogata, S. et al. (1994) Cancer Res. 54, 4036-4044	
C93	Orlandi, et al. Clinical Cancer Research, 2007, Vol. 13, pp. 6195-6203	
C94	Pardoll et al. Curr. Opin. Immunol. 1993, 5, 719-725	
C95	Peeters, C. C. et al. (1991) Infect. Immun. 59, 3504-3510	
C96	Qiu et al. Liebigs Ann. Chem. 1992, 217-224	
C97	R.U. Lemieux Chem. Soc. Rev. 1978, 7, 423-452	
C98	Ragupathi et al. "On the power of chemical synthesis: Immunological evaluation of models for multiantigenic carbohydrate-based cancer vaccines", Proc. Natl. Acad. Sci. USA, 99(21):13699-13704, 2002	
C99	Ragupathi G, et al. A novel and efficient method for synthetic carbohydrate conjugate vaccine preparation: Synthesis of sialyl Tn-KLH conjugate using a 4-(4-N-maleimidomethyl) cyclohexane-1-carboxyl hydrazide (MMCH) linker arm. Glycoconjugate J., 15: 217-221, 1998	
C100	Ragupathi, G. et al. Cancer Immunol Immunother 2003, 52, 608-616	
C101	Reddish et al. Glycoconjugate J. 1997, 14, 549-560	
C102	Reithal, Y. J. Am. Chem. Soc. 1952, 74, 4210-4211	
C103	Riddles PW, Blackeley RL, Zerner B Ellman's reagent: 5,5'-dithiobis(2-nitrobenzoic acid)—a reexamination, Anal Biochem 94: 75-81, 1979	
C104	Rodriguez et al. Aust. J. Chem. 1990, 43, 665-679	
C105	Sabbatini et al. Int. J. Cancer 2000, 87, 79-85	
C106	Sarnaik, S. et al. (1990) Pediatric Infectious Disease 9, 181-186	
C107	Sarvas, H. et al. (1974) Scand. J. Immunol. 3, 455-460	
C108	Schmidt et al. Synthesis 1984, 53-60	
C109	Schmidt, R. R. Synthesis of Glycosides. In Comprehensive organic synthesis; selectivity, strategy and efficiency in modern organic chemistry, Trost, B. M., Fleming, I., Eds.; Pergamon Press: Elmsford, NY, 1991, Vol. 6, pp. 33-64	

Substitute for form 1449/PTO  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  <i>(Use as many sheets as necessary)</i>				<b>Complete if Known</b>	
				Application Number	10/728041
				Filing Date	December 3, 2003
				First Named Inventor	Samuel J. Danishefsky
				Art Unit	1643
				Examiner Name	Karen A. Canella
Sheet	5	of	5	Attorney Docket Number	2003080-0142(SK-893-B)

	C110	Schwarz, J. B. et al. J. Am. Chem. Soc. 1999 121, 2662-2673	
	C111	Seeberger, P. H. J. Carbohydr. Chem. 2002, 21, 613-643	
	C112	Severin et al. Biokhimiya (Moscow), 1973, Vol. 38, pp. 583-588 (abstract only)	
	C113	Sim et al. J. Am. Chem. Soc. 1993, 115, 2260-2267	
	C114	Springer, G. F. Science 1984, 224, 1198-1206	
	C115	T. Boon, Int. J. Cancer 1993, 54, 177-180	
	C116	Warren, et al. "Synthetic Glycopeptide-Based Vaccines", In: Topics in Current Chemistry, 2007, Vol. 267, pp. 109-141	
	C117	Williams, L. et al. (2000) Tetrahedron Lett. 41, 9505-9508	
	C118	Yin et al. Int. J. Cancer, 1996, 65, 406-412	
	C119	Zhang, S. et al. (1996) Cancer Research 56, 3315-3319	
	C120	Zhang, S. et al. Int. J. Cancer 1997, 73, 42-49	
	C121	Zhang, S. et al. Int. J. Cancer 1997, 73, 50-56	

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup>Applicant's unique citation designation number (optional). <sup>2</sup>Applicant is to place a check mark here if English language Translation is attached.